



Projected Capacitive Input (PCI) User Guide

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Preface

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Revision Table

| Date | Revision | Changes |
|----------------|----------|--------------------------------------|
| 2012 / 05 / 10 | 1.0 | Initial |
| 2012 / 09 / 11 | 1.1 | Remove the word - "P2" in user guide |

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Chapter 1 Introduction

PenMount Projected Capacitive Touch (PCI) Control Board is the board for supporting projected capacitive touch. There are a series of PCI controller products from PenMount. It facilitates the high precision touch activation and dual fingers gesture recognition with minimum touch force required.

PenMount PCI control board built with all the functionality to operate the PCI touch smoothly. Customer could define their product functions and mechanical requirements by referring this manual.

1.1 About this Manual

This manual describes the features of the PenMount PCI Control Board series, how to operate the utility, install and use the software drivers and utilities with your operating system.

This manual is for users who are using the PenMount PCI Control Board and software, as well as for engineers who are integrating and customizing the control board for use with other products.

1.2 Projected Capacitive Touch Panel

AMT provides various different sizes of standard Projected Capacitive touch panels, from 3" to size larger than 15". Customers could find related PenMount controller for each PCI touch panel. If the PCI touch is designed specially, the related PCI control board might be different. For any questions about connecting the control board to touch panel, please check to your system manufacture.

1.3 PenMount PCI Control Board

PenMount designed various control boards for AMT projected capacitive touch panels. For different size of PCI touch panel need to match with different PenMount Control Board.

| Model | Interface | | | Touch Screen Size |
|---------------------|-----------|--------|------------|-------------------|
| | USB | RS-232 | Others | |
| PM1100 | | • | Contact us | 3" - 4.9" |
| PM1200 | • | • | | 5" - 7.9" |
| PM1201 | • | • | | 5" - 7.9" |
| PM1300 / PM1300A | • | | | 8.0" - 11.9" |
| PM1400 | • | • | | 12" - 15" |

Remark:

- It is subject to be changed without previous notice
- The Touch panel size might be supported by different PenMount control board if the touch panel is development based on special request.

1.4 Drivers & Utilities

All of the PenMount PCI series control boards are bundled with software drivers and utilities that support the most popular hardware platforms and operating systems.

PCIMset is the initial setting utility for PenMount PCI control board series. Users are able to adjust controller input interface, touch panel position, touch sensitivity and check firmware version through this software. PenMount PCI drivers are not allowed to install or operate when using PCIMset. This utility is designed for integrator and hardware designer. We don't recommend end user to adjust parameters with PCIMset. For end customer, we suggest the adjustment is better to be done through utility built in PenMount driver.

After installing the PenMount PCI driver, users can use the other PenMount touch functions - like edge compensation, line test - with the utility built in the driver. Please refer to AMT or PenMount web for the drivers for PenMount PCI Control Board series support.

1.5 Before you start to use this manual

Check the PCI touch panel and PenMount control board has been integrated properly into the computer system. If your need to integrate the control board and touch panel, please refer to “**AMT Projected Capacitive Touch Panel Integration Guide**”.

1.6 After Sales Service

PenMount PCI control board series and software will be updated on a regular basis. For more latest updated information, downloads and technical support, please refer to our website at: <http://www.amtouch.com.tw> or <http://www.penmount.com.tw>

Chapter 2 Install Drivers for PenMount PCI Boards

This chapter describes how to install drivers and other software that enables your PenMount PCI P2 control boards to work with various operating systems.

PenMount PCI boards support the following connection interfaces:

| Model | Interface | |
|------------------|-----------|--------|
| | USB | RS-232 |
| PM1100 | | • |
| PM1200 | • | • |
| PM1201 | • | • |
| PM1300 / PM1300A | • | |
| PM1400 | • | • |

PenMount PCI drivers support for most common operating system of Windows and Linux systems. Please visit our website (<http://www.amtouch.com.tw> or <http://www.penmount.com.tw>) to see the support O.S.

2.1 PenMount PCI Windows Driver

PenMount provides 2 different drivers for different interface in Windows 2000/ XP/ 2003/ 7:

PenMount RS-232 WindowsXP-Vista-7 32bit Driver

PenMount USB WindowsXP-Vista-7 32bit Driver

Under Windows Vista/ 7 environments, PenMount board USB interface could drive with inbox driver.

2.1.1 Install PenMount PCI Windows Driver in XP

Before install the driver, please connect PCI control board to RS232 or USB port of computer. Then extract “**PenMount RS-232 WindowsXP-Vista-7 32bit Driver VX.X.X.X.zip**” or “**PenMount USB WindowsXP-Vista-7 32bit Driver VX.X.X.X.zip**” to your disk (depends on which interface you connected). The installation and operation for PenMount PCI RS-232 and USB driver are almost the same. Please refer to the following installation steps.

Before run the setup.exe, if you need to use Gesture function, please added the parameter Gesture = 1 in the install.ini file as (Fig.1). Then find Setup.exe and execute it. (Fig.2)
When Setup Wizard appears, click on Next button to proceed. (Fig.3)

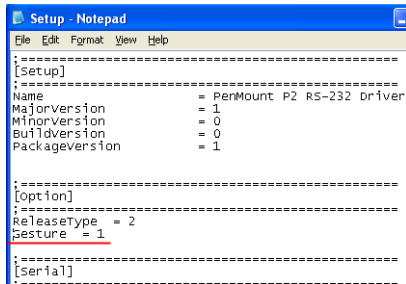


Fig.1

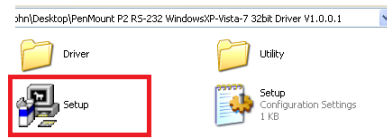


Fig.2

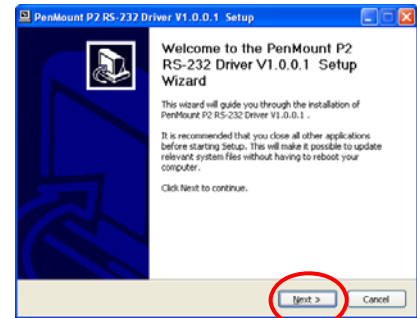


Fig.3

A License Agreement window appears. Click I Agree button to continue installation. (Fig.4)
Choose desirable installation folder path , then hit Install. (Fig.5)
The installation proceeds that will appears several Software Installation dialogue box and Hardware Installation dialogue box, For example: When seeing Software Installation dialogue box saying like (Fig.6) , Click Continue Anyway button to proceed.

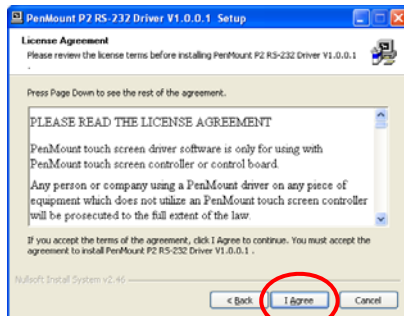


Fig.4

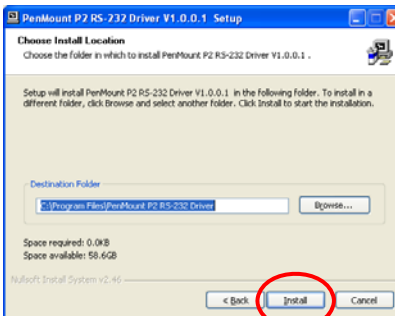


Fig.5

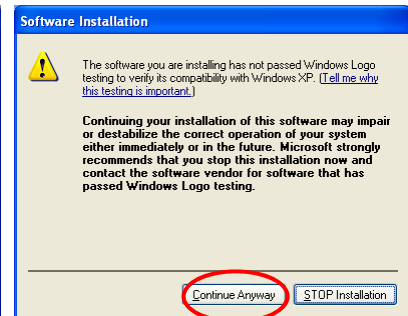


Fig.6

When other Hardware Installation dialogue box appears saying like (Fig. 7). Click Continue Anyway button to proceed. When seeing Found New Hardware Wizard dialogue box appears saying like (Fig.8). Click Cancel button to proceed.
A window notifying of installation completion appears. Click Finish button to quit. (Fig.9)

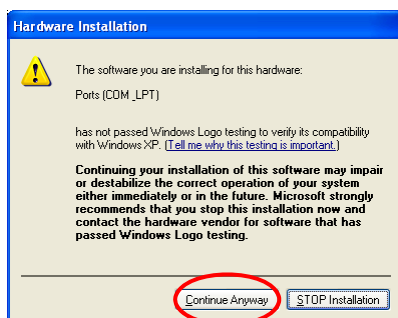


Fig.7

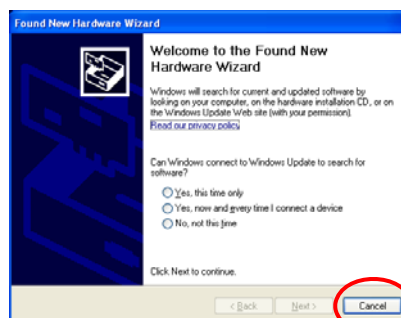


Fig.8

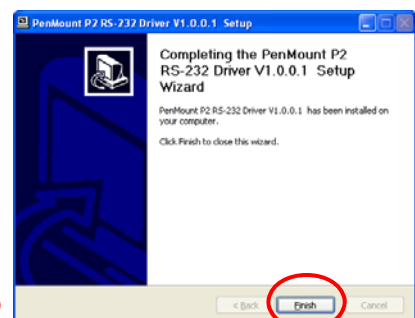



Fig.9

As soon as driver installation finishes, you will see the icon of PenMount Monitor  show up in the notification area.



both the icons of PenMount Monitor  and Gesture AP  show up in the notification area.



2.1.2 Uninstall PenMount PCI Windows Driver in XP

- Exit **PenMount Monitor (PM)** in the notification area.
- Go to **Control Panel**. Click **"Add/Remove program"**. Select **"PenMount USB Driver V X.X.X.X"**. (or **"PenMount RS-232 Driver V X.X.X.X"**). Click **"Change/Remove"** button. (Fig.10)
- Select **'Uninstall'** to remove **PenMount Windows Universal Driver**. (Fig.11 & Fig.12)

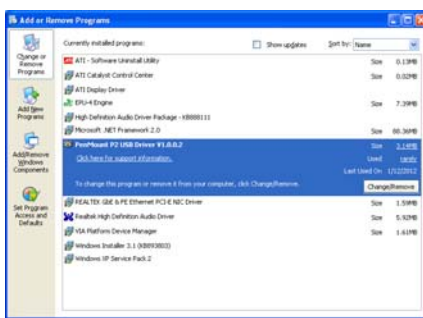


Fig.10

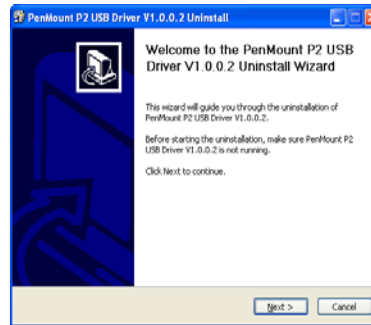


Fig.11

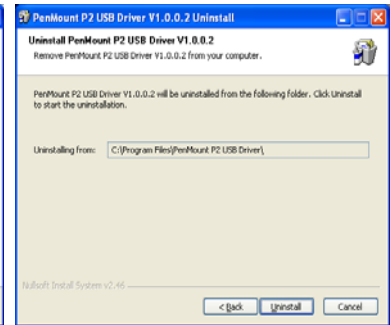


Fig.12

2.1.3 Install/ Uninstall PCI PenMount Windows Driver in Win7

To install/ uninstall **PenMount PCI RS-232** and **USB** driver in Windows Vista/ 7 is similar to in Windows XP. However, the default installation mode for PenMount PCI USB driver on Windows XP and Win7 will be mouse device. For PenMount PCI RS232 driver, the driver will be installed as digitizer device in Win7. If you need to install PenMount USB device as digitizer device in Win7, it's not necessary to use PenMount driver. After connect the device to computer, Win7 system will install inbox driver automatically. The default inbox driver of Win7 will set PenMount device as digitizer.

After install **PenMount PCI RS232** driver in Windows 7 environment successfully. You will see the difference that a **PenMount Control Panel** icon shows up on the desktop without a **pm** icon in the notification area. And the Gesture AP () will still show in notification area. See the screenshot below: (Fig.13)

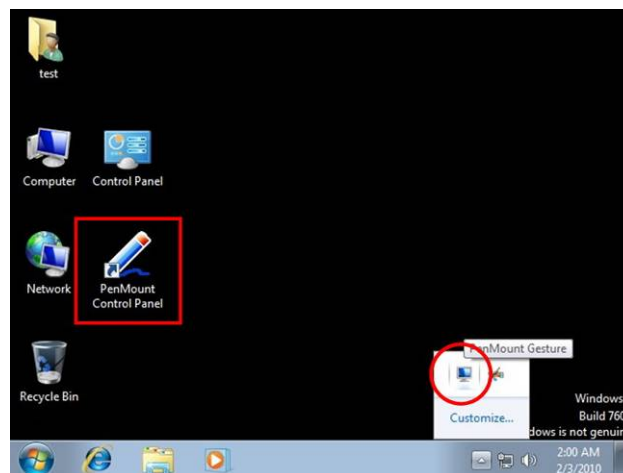


Fig.13

2.2 Install PenMount PCI Linux X Window Driver

Before installing **PenMount PCI Linux X Window Driver** for PenMount boards, you must have Linux X Window installed and running on your computer. You must also have PenMount Serial Interface either 110x, 120x, 1300/1300x, 140x control boards installed.

PenMount PCI Linux X Window Driver for PCI boards support various operating systems. The supported Linux version listed on our website. Please visit <http://www.amtouch.com.tw> or <http://www.penmount.com.tw> to view the supported Linux versions.

2.2.1 Install PenMount PCI Linux X Window Driver

Please refer to the readme file included in the driver folder.

2.3 Install PenMount PCI WinCE Driver

Before installing **PenMount WinCE Driver**, you must have WinCE system installed and running on your device. You must also have PenMount Serial Interface either 110x, 120x, 1300/1300x, 140x control boards installed.

NOTE: Make sure you can move the WinCE cursor with a serial mouse attached to the target COM port (e.g. COM2) before connecting the PCI control board by RS-232 port.

2.3.1 Install PenMount WinCE Driver

Please see the readme file included in the driver folder.

Chapter 3 PenMount PCIMSet

3.1 The first execution of PCIMSet

Extract PCIMSet.zip to your hard drive, and PCIMSet.exe file can be found in the extracted folder.

Double click on PCIMSet.exe for executing the program. If you use RS232 interface, please remove PenMount device driver or temporarily disable (Fig.14) the PenMount PCI serial device in the Device Manager before executing PCIMSet program; if you use USB interface, there is no need to remove the device driver nor to disable the device. The program can detect PenMount PCI controller automatically and show all application interfaces for adjustment.

Note: When Com Port Selected window (Fig.15) appears, if you are using RS232, please select the Com Port and then click “OK”; If the using port is USB, please select either “OK” or “Cancel”. If the window “No PCIM Device Detected” as (Fig.16) shows, it supposes to be PenMount PCI device that hasn’t been connected to the PC.

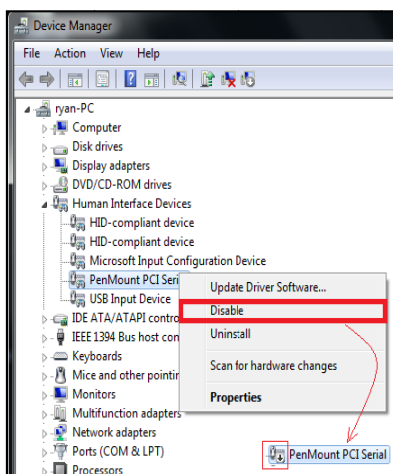


Fig. 14

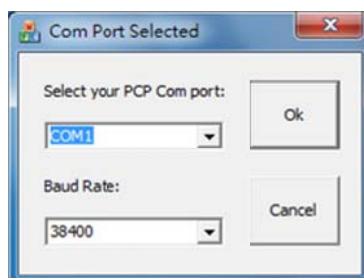


Fig. 15

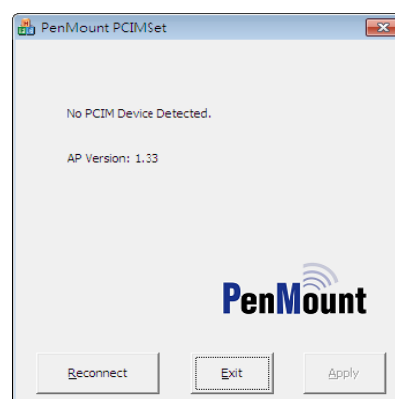


Fig. 16

Please make sure that PenMount PCI device has been connected to the PC correctly, and then press the “Reconnect” button. If you have connected USB or RS232 correctly with PC, but the setting page still can’t appear, please make sure that device power has been provided. This issue could also be caused by the controller is using different connecting interfaces.

Note: Please do not connect more than one PenMount PCI controller to the computer when using PCIMSet, since it can change settings for one PenMount PCI control board only.

3.2 PCIMSet settings:

Note: Please use mouse for adjusting the settings, since touch function will be disabled when PCIMSet is launched.

PCIMSet settings are as following:

- Sensitivity
- Parameters
- Panel Size
- Common

Each function is described as following:

3.2.1 Sensitivity:

Sensitivity (1~15):

Select from 1 to 15 for adjusting the sensitivities. The higher value you set, the more times that the capacitance will be calculated, and the overall capacitance sensing parameters will be increased as well; thus the higher sensitivity can be detected, and the sample rate will be relatively lower. (Fig.17)

Note: After the setting is changed, you will need to perform “Threshold Adjust” (Fig.18)

Do not touch the panel while “Threshold Adjust” is running. (Fig.19)

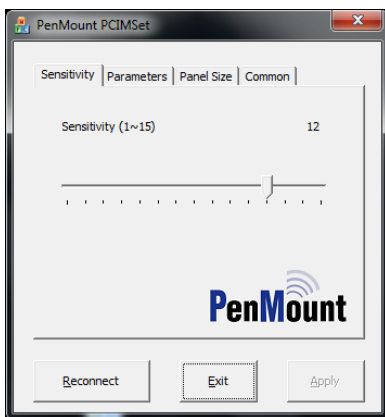


Fig.17

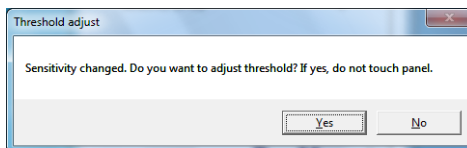


Fig.18

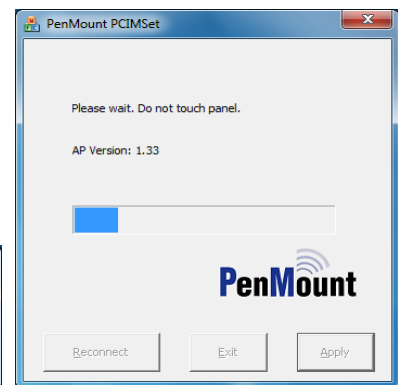


Fig.19

3.2.2 Parameters:

a. Reverse X and Y:

For reversing the X and Y axis operation, it is required when integrator need to rotate the touch panel. (Fig.20)

b. Single Touch:

For switching between single and multi-touch function.

Note: The multi-finger support depends on the O.S. For example, in windows XP, all the built in software in windows only support single touch. If you need dual touch function in this system, you need develop specific software for supporting dual touch function .

c. Default:

All parameters will be reset to the factory default values.

d. Edge Adjust:

(Fig.21) will appear when execute “Edge Adjust”. With this function, you can adjust the left, right, up and down sides of the touch panel. In some situation, the touch sensing in the edge area might affect by mechanic design. This function could improve the touch performance in the edge area. If the edge area is difficult to touch, please increase the value. If the sensing points shift too much in the edge area, please decrease this value. For end user adjustment, please use “edge compensation” function in driver to adjust.

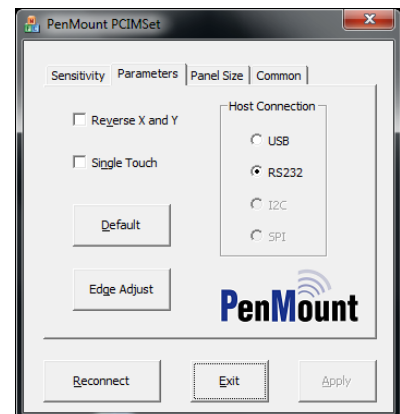


Fig.20

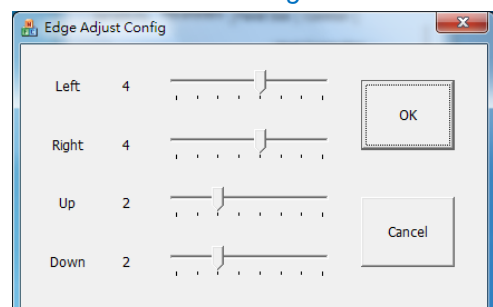


Fig.21

e. Host Connection:

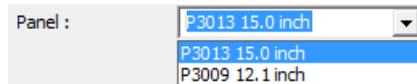
Please take notice before changing the “Host Connection” settings in PCIMSet. After choosing different interface, please connect the PenMount control board with the corresponding cables.

For example, if you use USB for setting PCIMSet, and then change Host Connection to RS-232, you will have to use RS232 cable afterwards.

3.2.3 Panel size selection:

a. Panel:

For choosing the suitable sizes of the touch panels. (Fig.22)



b. Cover Lens:

For choosing one of the supported cover lens thickness. (Fig.22)

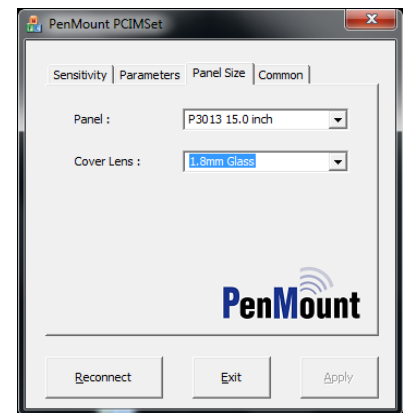


Fig.22

3.2.4 Common

a. Firmware version

The firmware version of PenMount PCI controllers are showed on the “Common” page. (Fig.23)

b. AP Version

The version of PCIMSet is showed on the “Common” page. (Fig.23)

c. Noise Level

The values are for calculating the standard deviation of the current environment. (Fig.23)

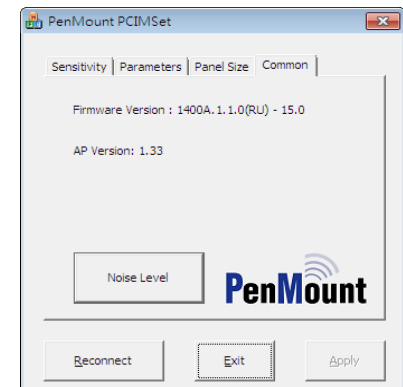


Fig.23

If the operation is not smooth, with broken lines or cursor drifting, please execute “Noise Level”, and do not touch the touch panel before the operation finishes. A “PCIM STDEV Result.log” file will be generated in the same directory as PCIMSet. Please send this file to PenMount team. (Fig.24)

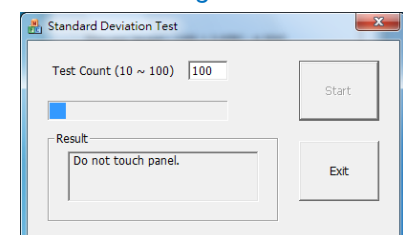


Fig.24

3.2.5 Others

a. Reconnect

It is for re-detecting PenMount PCI device.

b. Exit

It is for exiting the PCIMSet utility.

c. Apply

After changing the parameters, execute “Apply” for making them effective.

Note: PCIMset is designed for integrator and designer adjustment purpose. If you are end user, please don't adjust touch function through utility in driver.

Chapter 4 Firmware Field Update Guide

4.1 PenMount Pmfu V1.21 Guide for Windows:

The PenMount field update utility (pmfu) is for user to load the updated firmware on field.

- Please remove any PenMount driver on the target system before running the firmware update utility, and reinstall it after the update process finishes.
- Make sure which interface is used for the PenMount device, and then connect PenMount PCI control board to your PC with a USB or RS232 cable.
- Please use mouse to execute Pmfu.

4.1.1 Firmware Field Update instructions:

- Run the field update program "PmFu.exe", if you don't want to reload previous parameter please uncheck this option, then update firmware will use default setting. (Fig.25)
- Click on the "Load PMF" button to find ".pmf file" which the firmware matches the PCI control board. For example, with PM1400A control board, messages will show as in (Fig.26)
The PM1400A control board has two firmware files and has to be updated twice. The first time is for the master controller, and the second time is for the slave controller. For instance, PM1400ASxxx.pmf is the firmware for the slave controller. On the other hand, PM1100, PM1200 and PM1300 only need to update the master controller firmware.

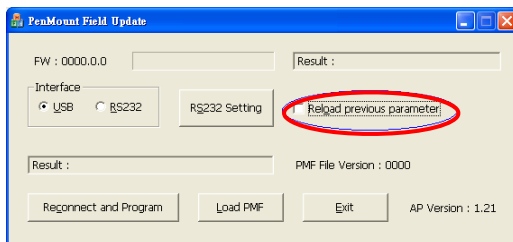


Fig.25

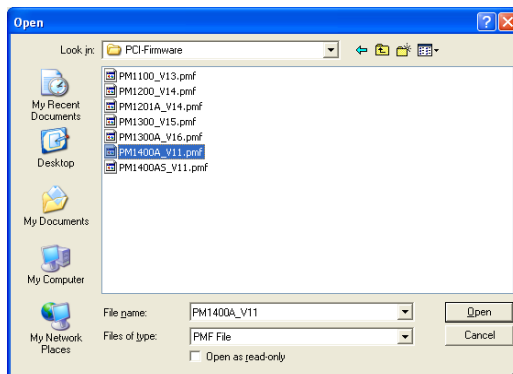


Fig.26

- Click on "Reconnect and Program" button (Fig.27)
- The firmware will be updated automatically show as in (Fig.28)

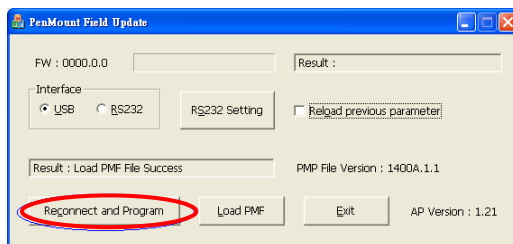


Fig.27

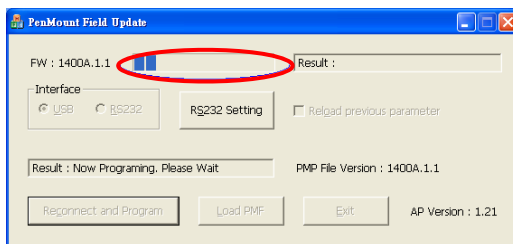


Fig.28

- When Update finished the result will show "Field Update Success" (Fig.29)

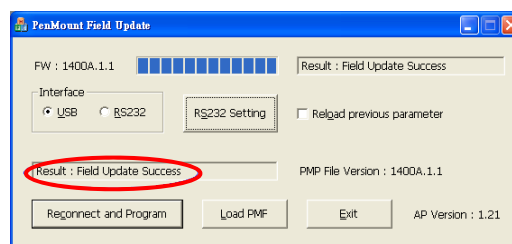


Fig.29

4.2 PenMount Pmfu V1.00 Guide for Linux

The PenMount field update utility (pmfu) is for user to load the updated firmware on field.

- Please remove any PenMount driver on the target system before running the firmware update utility, and reinstall it after the update process finishes.
- Make sure which interface is used for the PenMount device, and then connect PenMount PCI control board to your PC with a USB or RS232 cable.

4.2.1 Firmware Field Update Step by Step

- Open the terminal
- Change the working directory to where the pmfu utility is extracted to, the firmware which you want to update need put in the same directory as pmfu.
- Run pmfu with root permission.
You will see the firmware list on the screen like as (Fig.30)
- Choose the firmware by enter the file index.

For example, with PM1400A control board, messages will show as in (Fig.31)

The PM1400A control board has two firmware files and has to be updated twice. The first time is for the master controller, and the second time is for the slave controller. For instance, PM1400ASxxx.pmf is the firmware for the slave controller. On the other hand, PM1100, PM1200 and PM1300 only need to update the master controller firmware.

```
john@localhost:~/home/john/Downloads/PCI-Firmware
File Edit View Search Terminal Help
[john@localhost ~]$ su
Password:
[root@localhost john]# cd Downloads/PCI-Firmware/
[root@localhost PCI-Firmware]# ls
PM1100_V13.pmf PM1201A_V14.pmf PM1400AS_V11.pmf pmfu
PM1200_V14.pmf PM1300A_V16.pmf PM1400A_V11.pmf
[root@localhost PCI-Firmware]# ./pmfu
=====
| PenMount Firmware Update Utility |
=====

Please choose a firmware file listed below :
[0] PM1300A_V16.pmf
[1] PM1100_V13.pmf
[2] PM1400AS_V11.pmf
[3] PM1200_V14.pmf
[4] PM1400A_V11.pmf
[5] PM1201A_V14.pmf

File Index > 4
```

Fig.30

```
john@localhost:~/home/john/Downloads/PCI-Firmware
File Edit View Search Terminal Help
=====
File : PM1400A_V11.pmf
Target : PM1400A
Version : 1.1
=====

[pmfwtool] Looking up devices, please wait ...

Found Device : PM1400A Control Board
Location : USB 005:008
Firmware : 1.0

[pmfwtool] Waiting device to settle .

=====
Updating Firmware
=====
WARNING
DO NOT disconnect device until update finish
Disconnect device will cause damage to device
=====
Updating Progress : 820 %
```

Fig.31

- Please do not disconnect device while updating firmware
- When updating progress reaches 100%, the update finishes.
- If the firmware chosen doesn't match the attached PCI board, or the PCI board is not connected, an error message will be shown as in (Fig.32)

```
Please choose a firmware file listed below :
[0] PM1300A_V16.pmf
[1] PM1100_V13.pmf
[2] PM1400AS_V11.pmf
[3] PM1200_V14.pmf
[4] PM1400A_V11.pmf
[5] PM1201A_V14.pmf

File Index > 0
=====
File : PM1300A_V16.pmf
Target : PM1300A
Version : 1.6
=====


[pmfwtool] Looking up devices, please wait ...
[pmfwtool] No matching device found !
[root@localhost PCI-Firmware]#
```

Fig.32

Chapter 5 Configure Touchscreen

This section describes how to configure the PenMount device after installed to windows environment. PenMount's driver provides various functions to test and enhance the controller performance under windows environment.

5.1 Configure PenMount PCI RS-232/USB In Windows XP

Right-click on the PenMount monitor icon  in the notification area and select "Control Panel" from the menu to configure the touchscreen. (Fig.33)

PenMount Control Panel opens. You will be able to see the icon of PenMount PCI USB under Device tab. In Device tab, you can see the devices detected on your system. Select a device and press the Configure button to set the configuration. (Fig.34)



Fig.33

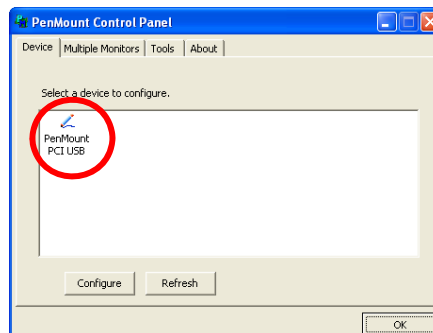


Fig.34

5.1.1 PenMount Control Panel

The functions under **PenMount Control Panel** are:

5.1.1.1 Device

In this tab, you can find out how many devices are detected on your system. Select any device by clicking on its icon. (Fig.35)

Setting

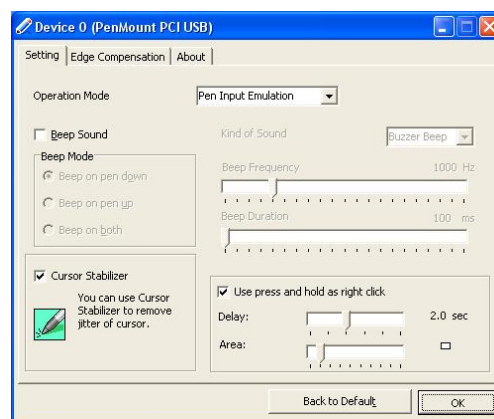


Fig.35

- **Operation Mode :** This mode enables and disables the mouse's ability to drag on-screen icons—useful for configuring POS terminals.
 - Pen Input Emulation – Select this mode and mouse will emulate Windows Vista pen input device operation, by which no mouse event will be sent until the touch is dragged out of range or released from the screen.
 - Click on Touch – Select this mode and mouse only provides a click function, and dragging is disabled.

- | | | |
|---|--|---|
| | Mouse Emulation – | Select this mode and mouse functions as normal and allows dragging of icons. |
| | Click on Release – | Select this mode and mouse only provides a click function when the touch is released. |
| • Beep Sound : | Beep Sound checkbox– | Enables/disables beep function. |
| | Beep on pen down – | Beep occurs when pen comes down. |
| | Beep on pen up – | Beep occurs when pen is lifted up. |
| | Beep on both – | Beep occurs when comes down and is lifted up. |
| | Beep Frequency – | Modifies sound frequency. |
| | Beep Duration – | Modifies sound duration. |
| | Kind of Sound – | Selects beep sound type. |
| • Cursor Stabilizer | | |
| checkbox: | Enables/disables the function support to prevent cursor shake. | |
| • Use press and hold as right click: | You can set the time out and area to your needs. | |

Edge Compensation

This page is the edge compensation settings for the advanced calibration. You can adjust the settings from 0 to 30 for accommodating the difference of each touch panel. If the edge area is difficult to touch, please increase the value. If the sensing point shifts too much in the edge area, please decrease this value. (Fig.36)

About

This tab displays information about the PenMount controller and driver version. (Fig.37)

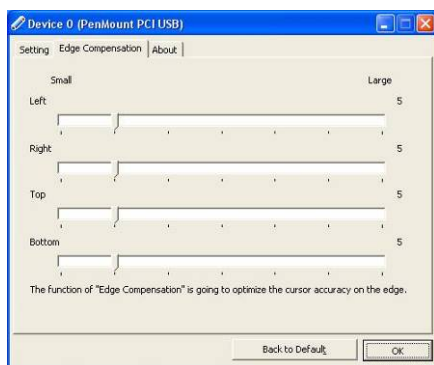


Fig.36



Fig.37

5.1.1.2 Multiple Monitors

Multiple Monitors supports two to four touchscreen displays for one system. Each monitor requires its own PenMount PCI board, either installed inside the display or in a central unit. The PenMount PCI boards must be connected to the computer RS-232 or USB ports. Driver installation procedures are the same as for a single monitor.

Before using **Multiple Monitors** you must have two or more monitors that are in extension mode. For display cards that support multiple monitors, we suggest you consider Matrox, nVidia, or ATI cards and inquire about operation and usability issues.

NOTE:

- The **Multiple Monitors** function is for the use with multiple displays only. Do not use this function if you have only one touchscreen display. Please note once you turn on this function, the **Rotating** function is disabled.
- Before you can use multiple monitors you need to map each monitor.

Enable the multiple display function as follows:

- In PenMount Control Panel, under Multiple Monitors tag, check the “Multiple Monitor Support” box. Then click “Map Touchscreens” to assign touch controllers to displays. (Fig.38)
- When the mapping screen message appears, click “OK”. (Fig.39)
- Touch each screen as it displays “Please touch this monitor. Press ‘S’ to skip”. Follow this sequence and touch each screen to map the touchscreens. (Fig.40)

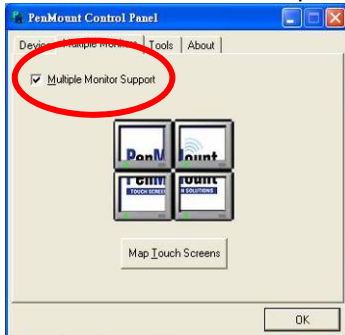


Fig.38

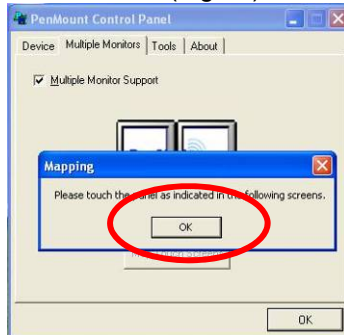


Fig.39

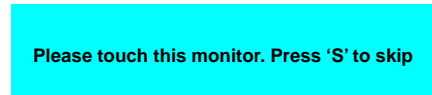


Fig.40

NOTES:

- If you change the resolution of display or screen address, you have to redo Map Touchscreens so the system understands where the displays are.
 - If you have multiple monitors but only one touchscreen, press ‘S’ to skip mapping step.
- An Example for 2 Units of Touch Monitor. Please make sure the touch monitor had plugged in and detected. (Fig.41 & 42)
 - In PenMount Control Panel, under Multiple Monitors tag, click “Map Touchscreens” then click “OK”. (Fig.43)



Fig.41



Fig.42

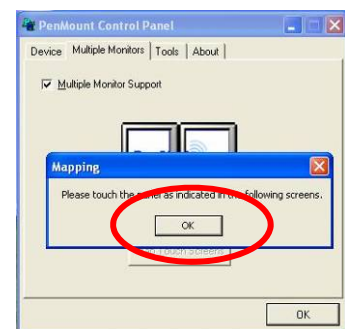


Fig.43

- Please follow the message show the display to match the controller and touchscreen. Please click “S” to skip if the monitor without use touchscreen. (Fig.44)
- When screen jump to Screen 2, please touch it. If screen 2 has no touch function, press “S” to skip it. (Fig.45)

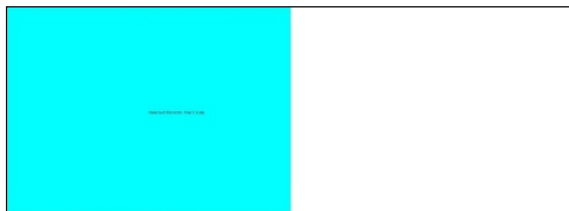


Fig.44

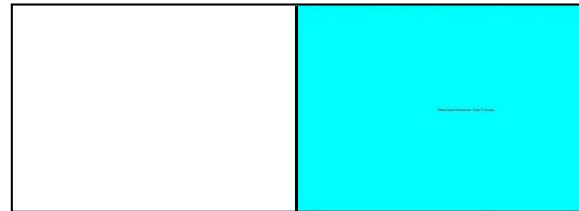


Fig.45

5.1.1.3 Tools

The buttons on such “PenMount Control Panel” have the following functions: (Fig.46)

- **Draw:** Tests or demonstrates the **PenMount** touchscreen operation.
- **Right Button Icon :** Enable right button function. The icon can show on **Desktop** or in the **notification area**.
- **Gesture Enable:** Enable/configure **Gesture AP** to support PenMount gestures recognition.

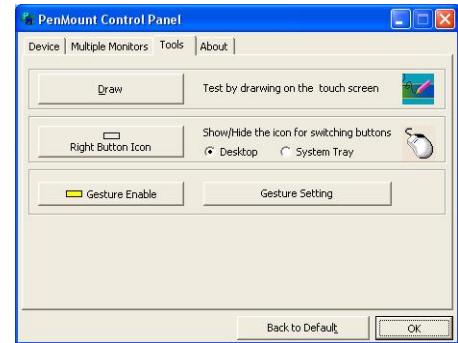


Fig.46

5.1.1.4 Screen Rotation Monitor:

The function supports **nVidia**, **Intel**, or **ATI** rotation automatic detection.

5.1.2 PenMount Monitor Menu Icon

PenMount Monitor icon (PM) appears in the notification area of Windows XP system when you turn on PenMount Monitor in PenMount utility.



PenMount Monitor has the following functions: (Fig.47)

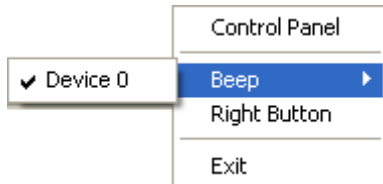


Fig.47

Control Panel: Open PenMount **Control Panel**.

Beep: Setting **Beep** function for each device.

Right Button: When this function is selected, a mouse icon appears in the upper right of screen. Click this icon to switch between Right and Left Button functions.

Exit: Exits the PenMount Monitor function.

5.2 Configure PenMount PCI RS-232/USB In Windows Vista/7

Double-click on the **PenMount Control Panel** icon on the Desktop to open the configuration utility. (Fig.48) On the **PenMount Control Panel**, you will be able to see the icon of PenMount PCI RS-232 (or USB) under Device tab. In **Device** tab, you can see the **devices** detected on your system. Select a device and press the **Configure** button to configure it.



Fig.48

5.2.1 PenMount Control Panel

The functions under **PenMount Control Panel** are:

5.2.1.1 Device

In this tab, you can find out how many devices are detected on your system. Select any device by clicking on its icon. (Fig.49)

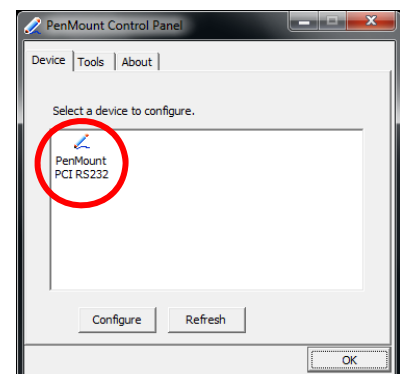


Fig.49

Edge Compensation

This page is the edge compensation settings for the advanced calibration. You can adjust the settings from 0 to 30 for accommodating the difference of each touch panel. (Fig.50)

About

This panel displays information about the PenMount controller and driver version. (Fig.51)

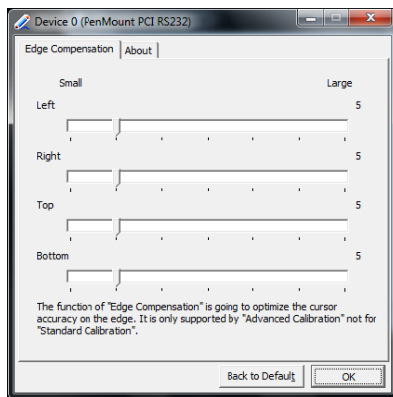


Fig.50

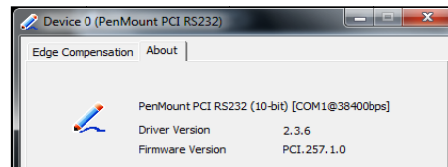


Fig.51

5.2.1.2 Tools

Draw

Tests or demonstrates the **PenMount** touchscreen operation. (Fig.52)

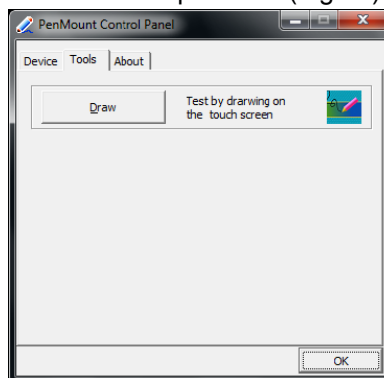


Fig.52

5.2.2 Multiple Monitors

In Windows Vista/7 environment, if you installed PenMount controller as digitizer device, you will need to use Multiple Monitors control functions provided by Microsoft to set the touch panel and monitor pairs. Here are the operating steps:

Open Control Panel – Find Tablet PC Settings and click – Hit Setup Button (Fig.53)

Touch each screen as it displays “If this is not the Tablet PC screen. Press Enter to move to the next screen. To close the tool, press Esc.”. Follow the sequence and touch each screen to map the touchscreens. (Fig.54)

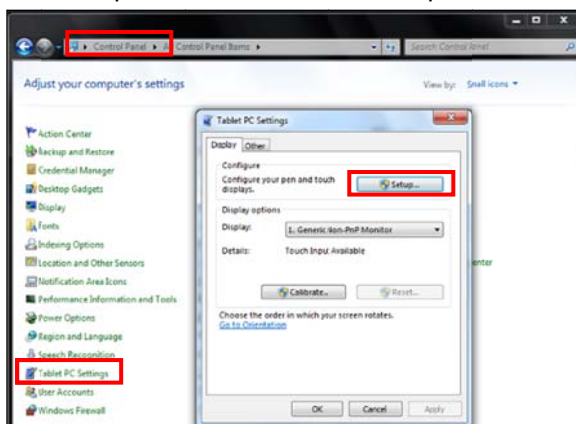


Fig.53

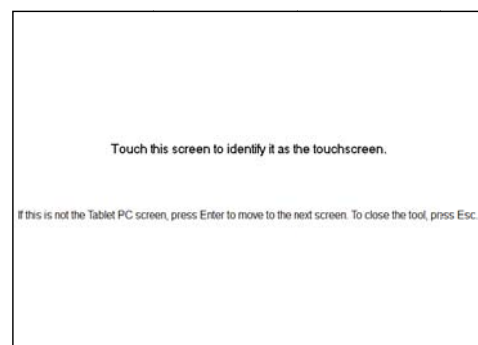


Fig.54

Chapter 6 Configure PenMount Gesture AP

6.1 PenMount Gesture AP for Windows 2000/XP/VISTA/7

This chapter will guide you to the PenMount Gesture AP that is applicable in Windows 2000/XP/Vista/7.

6.1.1 Invoke PenMount Gesture AP

Before install PenMount WindowsXP-Vista-7 32bit Driver, if you need to use Gesture function, please added the parameter Gesture = 1 in the install.ini file as bellow: (Fig.55)

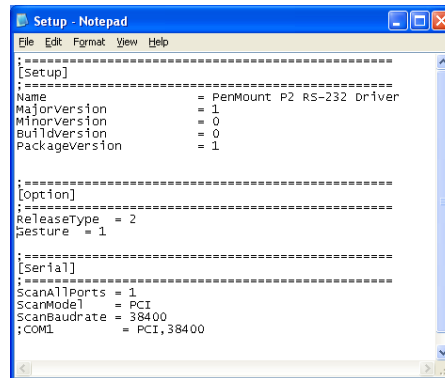


Fig.55

After install the PenMount WindowsXP-Vista-7 32bit Drivers. There are two different way to enable the Gesture function:

a. Enable from notification area

Select the “Gesture Enable” item of the right-click menu on the PenMount icon in notification area. A PenMount Gesture AP icon will show up in the notification area. If the icon shows with forbidden red circle that means the gesture function is disable. (Fig.56)

b. Enable from PenMount Control Panel

In PenMount Control Panel, select Tools tab and press Gesture Enable button. PenMount Gesture AP icon shows up in the notification area. PenMount Gesture AP is running. (Fig.57)

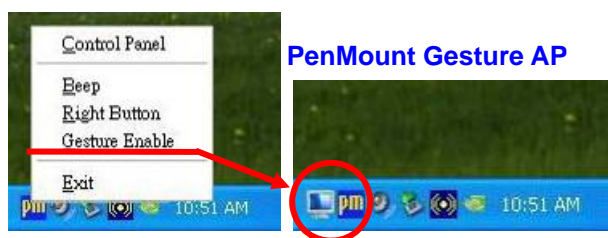


Fig.56

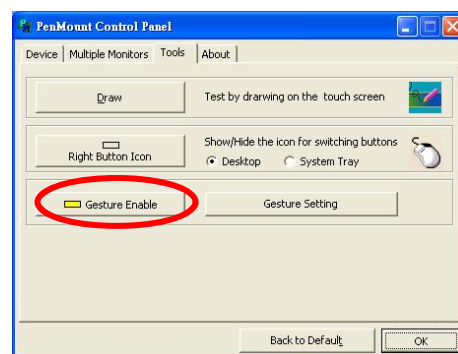


Fig.57

The Gesture icon on notification will show 2 different statuses:



: Enable



: Disable

If the gesture function can't operate, please check if the gesture icon is in Enable status.

6.1.2 Configure PenMount Gesture AP

To configure PenMount Gesture AP, you could call setting function from notification area or from PenMount Control Panel.

a. From notification area

Right-click on the PenMount Gesture AP icon in the notification area, select Gesture Setting from the menu that appears. See the illustration below. (Fig.58)



Fig.58

b. From Control Panel

Select Tools tab and press Gesture Setting button in PenMount Control Panel. (Fig.59)
[Gesture Setting] Window will show (Fig.60)

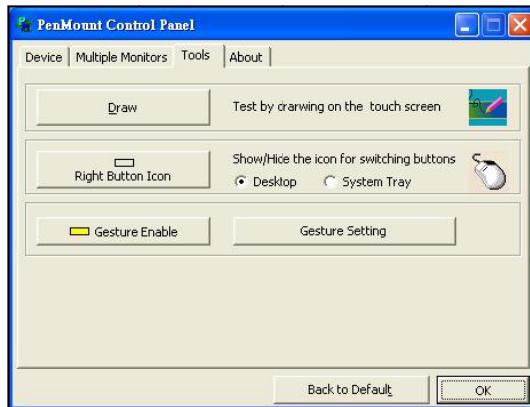


Fig.59

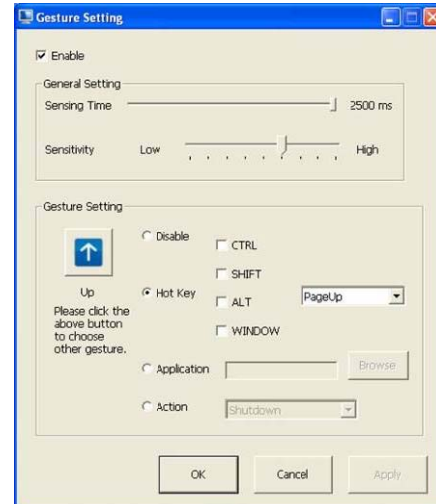























Fig.60

In different operating system, there might be different available gestures.

| | | | |
|---|--|---|--------------------------------|
|  | Page Up |  | Page Down |
|  | Backward (Left Arrow) |  | Forward (Right Arrow) |
|  | Copy (Ctrl + C) |  | Paste (Ctrl + V) |
|  | Undo (Ctrl + Z) |  | Delete |
|  | Zoom in ([Pad] +) |  | Zoom out ([Pad] -) |
|  | Rotate Counter Clockwise (Ctrl + L) |  | Rotate Clockwise (Ctrl + K) |
|  | Open On-Screen Keyboard (Execute OSK.EXE) |  | Save Document (Ctrl + S) |
|  | Close Program (Alt + F4) | | |
|  | UP Arrow |  | Down Arrow |
|  | Left Arrow |  | Right Arrow |
|  | [Pad] + |  | [Pad] - |

In the [Gesture Setting] window, you can proceed to configure PenMount Gesture AP:
See picture below. (Fig.61)

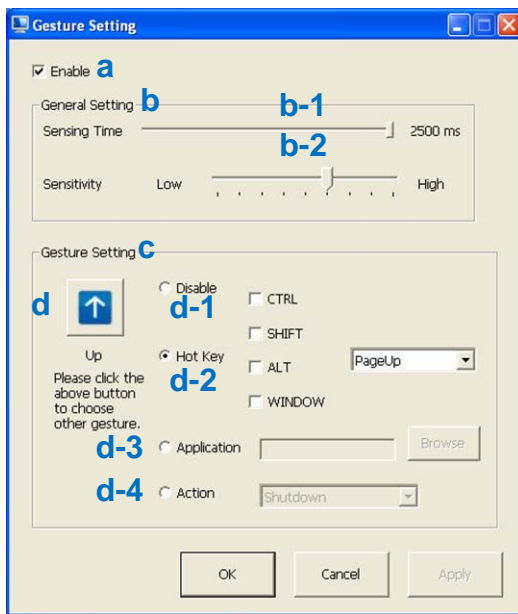


Fig.61

- a. **Enable/disable Check Box.** Select/deselect the box to enable/disable PenMount Gestures.
- b. **General Setting Box**
 - b-1. **Sensing Time** - Move the slider to adjust **PenMount Gestures Sensing Time** between 200 ms (0.2 sec) and 2500 (2.5 sec). The shorter the sensing time is configured, the faster the gesture has to be done.
 - b-2. **Sensitivity** – Move the slider to adjust how sensitive you want your finger stroke on the touchscreen to be sensed.
- c. **Gesture Settings Group Box.** This group box allows you to individually configure each gesture.
- d. **Gesture Select Button.** Press this button to select the specific gesture you are going to configure. When the gesture icon turns to blue, it is enabled. When it is gray, it is disabled. See the following for details.

- d-1. **Disable Button.** When this button is selected, the gesture is disabled.
- d-2. **Hot-key Configure Button.** Configure the hot-keystrokes for specific gesture. The hot-key can include up to 5 keystrokes. When that gesture is sensed, the configured keystrokes will be reported.
- d-3. **Application Invoke Button.** Configure to invoke a specific application with particular gesture. After the gesture is sensed, the specific application will run.
- d-4. **Action Configure Button.** Configure to make use of **PenMount Gesture AP's** built-in shortcuts. So that when a particular gesture is sensed, a specific action will be taken. **PenMount Gesture AP** have the following shortcuts built in: (Fig.62)

Note: For **Disable touch function**, after touch function is disabled, the mouse-pointer won't move following your finger sliding on the touchscreen and your finger tapping won't trigger any action, however, gestures will still be sensed.

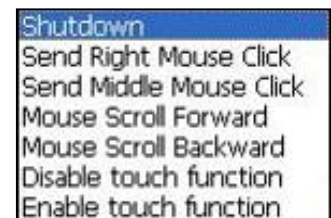


Fig.62

(Note: If you select **Disable touch function**, the curser will not react to finger movement on the touch screen and the tapping will not trigger any program action. However, the gesture recognition is still functioning.)